Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application.

Listing of the Claims:

1. to 8. (cancelled)

9.   (previously presented) The cable of claim 30 wherein the printer controller comprises:

a) a random access memory for storing a non-resident printer controller program;

b) a processor for executing computer programs coupled to the random access memory; and

c) a dynamic loading program for automatically managing the download of the non-resident printer controller program to the random access memory and for automatically determining whether the printer controller program is compatible with the print engine and the printer controller;

d) a print controller ready data interface for receiving print controller ready data (PCRD) from the source;

e) a print engine ready data interface for providing print engine ready data (PERD) to the printer; wherein the printer controller receives the print controller ready data and based thereon generates print engine ready data.

10.   (previously presented) The cable of claim 9

wherein the dynamic loading program, when executing on the processor, selectively downloads from the source the non-resident printer controller program to the printer controller when it is determined that the current version of the printer controller program resident in the random access memory is not valid.

11.   (previously presented) The cable of claim 9

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wherein the dynamic loading program, when executing on the processor, selectively downloads from the source the non-resident printer controller program to the printer controller when it is determined that the current version of the printer controller program resident in the random access memory is one of non-existent and corrupt.

12.   (previously presented) The cable of claim 10
wherein the printer controller program, when executing on the processor, receives print controller ready data and based thereon generates print engine ready data for controlling a print engine.

13.   (previously presented) The cable of claim 9 further comprising:
an integrity check module, when executing on the processor, for performing an integrity check on the printer controller program to determine whether the printer controller program is valid, re-installing the printer controller program from the source when the printer controller program is not valid, performing compatibility tests to determine whether the printer controller program is compatible with the printer controller and a printing software, re-installing the printer controller program from the source when the printer controller program not compatible with the printer controller and the printing software.

14.   (previously presented) The cable of claim 9 wherein the printer controller is embodied in one of a single integrated circuit and an application specific integrated circuit (ASIC).

15.   29.   (canceled)

30.   (previously presented) A cable comprising:
a first connector having a print controller ready data interface for receiving print controller ready data (PCRD):

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a second connector having a print engine ready data interface for providing print

engine ready data (PERD); and

a printer controller for receiving the print controller ready data and based thereon

for generating print engine ready data.

31.   (previously presented) The cable of claim 30 further comprising:

a cable format conversion mechanism for converting signals in a first format into

corresponding signals in a second format.

32.   (previously presented) The cable of claim 30 further comprising:

a multiple target device support mechanism for supporting at least two different

types of target devices.

33.   (previously presented) The cable of claim 32 wherein the multiple target device

support mechanism further comprises.

a laser printer interface for providing an interface to laser printers;

non-impact printer interface for providing an interface to non-impact ink printers;

and

a common formatting circuit coupled to the laser printer interface and the non-

impact printer interface for providing functions to the laser printer

interface and the non-impact printer interface.

34.   (previously presented) The cable of claim 30 wherein the print engine ready data

interface includes:

a first signal for sending commands from the printer controller to the print engine;

a second signal for receiving status from the print engine in response to

commands sent by the printer controller; and

a third signal for transferring data from the printer controller to the print engine.

35.   (previously presented) The cable of claim 34 wherein the print engine ready data

interface further includes:

a first user interface signal for sending displayable data to the print engine: and

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a second user interface signal for receiving user input from the print engine.

36.   (previously presented) The cable of claim 30 wherein the print controller ready data interface includes one of an industry standard computer port interface, a parallel port interface, a serial port interface, IEEE 1284 parallel port interface, a USB serial port interface, and an Ethernet interface.

37.   (previously presented) The cable of claim 30 wherein the print engine ready data (PERD) interface includes one of a parallel port interface, a serial port interface, an IEEE 1284 parallel port interface, a USB serial port interface, an Ethernet interface, and a custom interface.

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